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THE LATEST FORM OF EMPIRICISM.

[Communicated for the Boston Medical and Surgical Journal.]

It has often been remarked, as one of the most singular features in the general character of men, that they love whatever is wonderful or extravagant. There seems to be a peculiar predisposition in the public mind, for the supernatural and absurd. The transition from wonder to admiration, and from thence to implicit confidence, is easy and natural; and hence men readily become the dupes of the artful and designing. Imposture and deceit have always been prevalent, and in every age there has existed a set of knaves and rascals, more or less numerous, who have contrived to deceive and fleece the public by the most dishonest and scandalous means. No profession, art or trade, has ever been exempt from their baneful influence. There are quacks in law and in theology, as well as in medicine; indeed, imposture and knavery have forced themselves into every system in which there is a prospect that *lucre* may be obtained.

But the science of medicine has ever been, and will probably ever continue to be, the most fruitful field of the empiric. The *modus operandi* of remedial agents is a matter involved in much obscurity, even in the minds of the most intelligent of the profession, and the *post hoc ergo propter hoc* is the only mode of reasoning which the public can appreciate. Hence the assertions of the quack are received, because proclaimed the loudest, and arrant knavery stalks abroad under the assumed garb of superior knowledge and skill. It is usually of but little avail for any one to oppose quackery in any of its forms, either by controversy or by open hostility. The man who does this usually finds, to his great chagrin, that the community are unable or unwilling to appreciate his reasoning, and the only reward he gets is to be laughed at for his pains.

When, however, a system of imposture appears, which lifts up its brazen front, and endeavors to exalt itself above the profession of medicine, and especially when it is drawing into its foul embrace members who have heretofore maintained an honorable standing in the profession, the necessity arises for examining its pretensions and investigating its claims. It is when medical men have abandoned the profession, or have engrafted upon it the most bare-faced system of imposture extant, that we are called upon to expose its nature, and to endeavor to arrest its evil tendency. We cannot remain silent or indifferent when we see our sci-

ence degraded by a comparison, and that, too, by medical men, with a system of trickery and humbug which is adroitly pushing its way into almost every community. We refer, in these remarks, to a new system of practice, the merits of which are set forth in handbills, and advertised in newspapers, in many sections of the country, especially in western New York and Ohio; a "*German system*," "*Uroscopian practice*," as it is styled by its advocates. So long as this system was confined to ignorant and irresponsible persons, it deserved not even a passing notice from the profession. But when respectable (?) physicians become its advocates and assert its superiority over what they term the "old school," it is time that the profession should awake, at least enough to cast off the extraneous matter with which it is encumbered.

What, then, we ask, is this new system, this "*Uroscopia*," of which there is so much boast from members of the profession? We cut the following from the handbill of one of these German doctors. "Those wishing to consult him, will recollect that he describes disease by the urine; which must be brought in a clean, two-ounce vial, with the name and age of the patient, as a record is kept of all cases described." This, then, is the "head and front" of the whole matter; unequivocally and undeniably a pretension to describe every form of ill that flesh is heir to, by an examination of the urine, of which examination, as will be subsequently shown, ocular inspection forms the principal, and in most cases the only part. From another advertisement of a company formed with a regular practising physician, we learn, that their "medicines are principally from the *vegetable kingdom*, and safe in all conditions in life;" thus at once catering to an unfounded prejudice in order to obtain popular favor.

It is not always an easy task to trace error to its source, or to determine the circumstances under which it originated. Almost every system of empiricism has just enough of truth incorporated with error, to hold its tottering fabric together, and when it is further covered over with the specious reasonings of its advocates, it may be difficult to strip it of its false covering, and expose it in such a manner that the public may see its deformity. In regard to the system of charlatany under consideration, it appears to be a reproduction of one of the grossest systems of fraud and imposture that was ever practised upon a credulous public. During the last century, "water doctors" were numerous in Great Britain and on the Continent, who drew after them eager crowds of the most gullible. Butler thus describes one of them.

"To whom all people, far and near,
On deep importances repair;
When geese and pullen are seduc'd,
And sows of sucking pigs are chow'd;
When murrain reigns in hogs or sheep,
And chickens languish with the pip;
When butter does refuse to come,
And love proves cross and humorsome;
To him with questions and with urine
They for discovery flock, or curing."

The famous Dr. Hornbook, it seems, was not ignorant of the art. Burns tells us that

"E'en them he canna get attended,
Although their face he ne'er had kenn'd it,
Just — in a nailblade and send it;
As soon's he smells't,
Baith their disease and what will mend it,
At once he tells't."

The popularity of these water doctors, however, soon gave way, and some new humbug in its turn occupied the attention of the public.

It is well known to those of the profession who take pains to inform themselves, that within a few years the state of the urine in diseases, especially of the urinary organs, has been made the subject of careful investigation. Physicians and chemists, distinguished for their accuracy in analytical research, have published their investigations into the nature of urinary deposits, and whether practical results will ever follow to the full extent of their researches, it is certain that very important additions have been made to our knowledge of urinary diseases; and the physician who should neglect to examine carefully the physical and chemical properties of the urine in those diseases, would not only deprive himself of important means of diagnosis, but would exhibit a degree of indolence and carelessness incompatible with the successful practice of his profession.

It is, however, to the publication of their researches upon the nature of urinary deposits, that the origin of the present system of "uroscopia" must be referred. The "water doctor" re-appears under a German cloak, propped up by a little smattering of these researches, and if he has not "stolen the livery of the court of heaven to serve the devil in," he has certainly stolen the livery of science to humbug and fleece the public.

But, we may ask, do these "uroscopian" doctors possess important means of diagnosis, which they conceal from the profession and the world? Are they able accurately to diagnosticate disease? We believe not, and think we have evidence to convince the most credulous followers of this system, that in no case of actual disease are they able to give a definite and clear diagnosis; that their description is only a general and confused statement, giving some symptoms that are common to almost all complaints, but furnishing no accurate knowledge upon which to found a successful course of treatment.

There is a large class in every community, who are always full of imaginary ills, and who experience the greatest difficulty in determining the nature of their malady; who are constantly shifting from one patent nostrum to another, and whose ailment changes with every shift of the wind. These individuals think themselves never so fortunate as when they find some one who professes to describe their case, and they yield implicit confidence to the first empiric who will humor their caprices, and give their fancied ills a "local habitation and a name." The more unintelligible and technical the better, as it furnishes to their minds the more evidence of the superior knowledge and skill of their adviser. There is also an opinion universally prevalent in the community, that the *liver* is the cause of most, if not quite all, of the diseases with which poor mortals are afflicted. No other organ possesses a tittle of the importance with which the liver is invested in the opinion of the multitude. The public, and even many of the profession, seem not to be aware that this

organ is seldom found diseased in *post-mortem* examinations. (We mean in this climate, and in country practice.) And what are called functional diseases, are as rare as they are indefinite.

These harpies, taking advantage of the popular delusions here referred to, sagaciously contrive to satisfy the patient by the use of very general and equivocal terms, that they have actually given him a profound description of his case. In a word, the silly patient imagines that the doctor, while looking into his "two-ounce vial," is peering mystically into his inward parts, and is fully qualified to reveal the mysterious nature of his disease. In most of the cases, especially those which are called chronic, which have fallen under the writer's observation, the "liver" has been the organ mainly affected. It has had either too *much* bile or too *little*, or its circulation is obstructed; but most usually, "it does not perform its proper functions." The gaping patient and friends sit mute with astonishment, while the *learned doctor* descants upon his "strumous diathesis," talks about the difficulty in the "portal circulation," refers to occasional pain in the head, weakness in the loins, and, if a female, to frequent "difficulty in voiding the urine"!

The writer ventures to assert, from pretty extensive acquaintance with these *urine doctors*, that no case has been produced, where it was impossible that any previous knowledge could be obtained, of which there has been a definite and accurate description of the disease. Cases of hydrocele, necrosis, epilepsy, phthisis, &c., have been examined, and no allusion whatever made in the description to the particular disease under which the patient was laboring. It is the easiest thing in the world to carry on imposition, especially in relation to a subject upon which the credulity of the public knows no bounds. There are many ways in which information may be obtained in relation to a case; and the artful doctor, by leading questions, or by the use of equivocal and very *scientific* terms, which he can interpret to suit his convenience, succeeds in convincing his patient of his wonderful skill. Several cases are known in which the examination was deferred until the doctor had time to make the necessary inquiries.

One of these German doctors located himself near a small watering place, where the "multitude of impotent folk, of blind, halt and withered," were accustomed to congregate, and who after two or three years' practice, is reported to have carried off the handsome little sum of \$12,000! He never occupied more than about three minutes, and usually much less time, in the examination, used no tests, but simply shook the vial and *looked at* its contents. One of his famous remedies was the "*froth of the sea*," which proved to be simply a solution of Epsom salts. The following is a case of his diagnosis. The patient had an attack of inflammation of one ear, from which he was recovering, but was troubled with acidity and flatulence of the stomach. The "doctor" being in the vicinity, was invited by some *officious* person to see him. A few days after, the patient put up his "two-ounce vial" for examination. The following description of the case was returned. "You have *cold inflammation* of the stomach, and *slimy adhesions* of the abdomen." The wife of the patient,

as it was afterwards discovered, who enjoys good health, but who was about three months *enceinte*, had emptied the vial privately and filled it with her own urine. The following is another of his descriptions, which we copy *verbatim et literatim*. "You are afflicted with a Weakly Digestion of the Stomach—and Stopages of the absorbants and a torpid State of the liver—affect of the Nerves—weakness of the back Palpitating of the Heart Pressure of the Brest and lungs—and a Stopage of Pancreas." The patient enjoys pretty good health; her only complaint is chronic catarrh.

One would naturally suppose that a system which carried upon its very front so much absurdity, and bore the marks of such gross imposition, would at once be frowned down by an intelligent public, and that, most certainly, every medical man would treat it with that degree of contempt which it deserves. But to the shame of our profession and of humanity, there are those in our ranks who have become the warmest advocates of this system, and who lose no opportunity for extolling its superiority as an exclusive means of diagnosis. The grossest fraud, however, which these "uroscopian" doctors endeavor to impose on the public, and even on the profession, is the assertion of the identity of their practice with the scientific examination of urinary deposits; differing from the latter only in being "one step in the advance." We believe and think it can be shown that what they so boastingly term "one step in the advance," is only a step from off the battlements of science on to the shaking quagmire of rascality and delusion; and the physician who ventures the step will, sooner or later, find himself sinking into its miry deeps.

But we propose to examine candidly the question—How far can a physical and chemical examination of the urine be available in diagnosis?

In the first place, we remark that urinary diseases are met with much more frequently in cities and large towns than in country practice; especially in the cities and towns of England. The free use of ale and porter, and the high living in which John Bull indulges, render him peculiarly obnoxious to calculous formations. Hence English physicians were the first to lead the way into this important branch of pathology, and the names of Prout, Brodie, Willis, Christison and Bird, stand conspicuous in the list of urinary pathologists, whose researches have enriched the domain of science.

But are we able, with the full results of the labors of these eminent men before us, to diagnosticate any urinary disease with unerring certainty? In order to predicate disease from any one symptom, it must be shown that, that particular symptom occurs always in that particular disease, and never in any other. To be pathognomonic, it must be invariable. Now every intelligent physician knows that there are but very few such symptoms, which, alone, can be relied upon in the diagnosis. He knows that, in order to arrive at a definite knowledge of any case, he must carefully investigate all the symptoms. No organ must be passed over in his survey. In relation to diseases of the urinary organs, it is true that by a physical and chemical examination of the urine, he may determine the nature of the deposit, whether it is lithic or uric acid, or some of their

compounds; yet he cannot tell the condition of the system or of the particular organ upon which the deposit depends. No one of the writers above mentioned pretends to describe a case even of urinary disease fully, by an examination of the urine. Dr. Bird, in speaking of uric acid and its compounds, and of the solvents in common use, says, "We must never lose sight of the great importance of endeavoring to remove that pathological state of the whole system, or of any particular organ, which may be the exciting cause of the calculous formation. *Nothing but a careful investigation of symptoms* can put us in possession of the knowledge necessary for this purpose. (p. 100, 1 Lond. Ed.)

Here, then, we have one of the latest writers on urinary deposits, stating distinctly, that a careful investigation of all the symptoms in the case, is necessary to the successful treatment of it. The same deposit is often mentioned as occurring in different diseases, requiring totally different treatment. Dr. Bird, in speaking of the coloring matter called purpurine, further says, "I think I have received some assistance in the diagnosis of dropsy," &c.—thus giving the whole matter a subordinate place, as affording only some *assistance* in the diagnosis. And yet this is the book which some of these "uroscopians" have the effrontery to show to the public as embodying their system of practice.

But if the examination of the urine is regarded as affording only auxiliary means of diagnosis in urinary diseases, it certainly must afford much more equivocal evidence in diseases of other organs, and in general affections of the system. To claim that the latter is identical with the former, is as absurd and extravagant as would be the course of a man who should set up the pretension to determine all diseases by an examination of the patient's saliva, and claim his system to be identical with an examination of the expectoration in pulmonary complaints!

But we have already pursued this subject farther than we at first designed; we therefore take leave of it with a single remark. We regard the examination of the urine of great importance in disease; we would not neglect it in any case where the diagnosis is involved in obscurity; but we deny that these "uroscopians" have the ability to make such an examination as would afford results satisfactory to an intelligent physician. They content themselves usually with a few minutes of ocular inspection, sometimes add a little nitric acid, and at once proceed to unravel the mysterious concatenation of morbid sympathies and disordered functions! We regret that our profession numbers any who have so little regard for its liberal character, as to abandon the honorable practice of it for the prospect of worldly gain.

March, 1847.

THE PATENT LETHEON—JACKSON AND MORTON'S SPECIFICATION.

[Communicated for the Boston Medical and Surgical Journal.]

It has been repeatedly said that Dr. Jackson is not concerned in the Patent for the Letheon; that Mr. Morton alone has taken out the Letters

Patent, and that whatever interest Dr. J. may have in it, arises out of some private contract between them. But it now appears that Dr. J. is really one of the proprietors—that the patent is issued in favor of Jackson and Morton conjointly.

The question has been asked, probably by every member of the profession, "what is patented?" I put the question, the other day, to a gentleman in Boston, who ought to know, and he replied, "The inhalation of the letheon by means of a valvular apparatus." This answer is far from satisfactory, for the same effect may be produced by inhalation of the vapor, without any valvular apparatus at all. If the "apparatus" is an essential part of the patent, the use of a different apparatus would enable any one to evade the penalty of the law. Have they patented the production of insensibility to pain by the inhalation of etheric vapor? No. A physician may administer the vapor, and produce insensibility to pain, with or without the valvular apparatus, without infringing upon the patent. He may administer it for the headache, the heartache or the bellyache, for tic douloureux, asthma or hysterics, and the patent will not reach him. Indeed, I am not quite sure that the patent will reach him if he uses the vapor in reducing dislocations or hernia, or in any operation in which "the knife or other instrument of operation of a surgeon" is not used.

What, then, is the precise thing patented? I answer, the combining with surgical operations the application of ether, or the vapor thereof. This is the whole thing. The use of it in the practice of medicine, by inhalation, is not patented, nor in surgery even, except when connected with operations. They claim the right to use an old and well-known medicine to produce a given result, in the treatment of certain cases. The principle, then, is, that a member of the profession, if he discover that a certain effect may be produced by any remedy or agent in common use, when used in a specified manner, in a certain case or class of cases, which effect had not (to his knowledge) been previously produced by said remedy or agent, he may secure to himself, by patent, the use of said article for producing this specified effect. For instance, should I discover that tinct. digitalis would cure Dixon Lewis, and others similarly affected, of excessive obesity, as it probably would, I might patent the use of tinct. dig. in such cases. If I discover that hydriod. potassæ, applied in a particular way, will cure dry scab, or scurfy eruptions of the skin and scalp, I may patent this particular use of it, in this class of cases, and require my brethren to pay me a stipulated sum, or a certain per cent. of the fees they may receive, for the right to use it in such cases. Should I discover that tinct. cayenne pepper and tinct. opii, combined in certain proportions, will cure the cholera, I may claim the sole right to use them in cholera, however many persons may be dying around me for the want of them. If some Yankee were now in Bagdad, with a few gallons of these tinctures, with their use secured to him by a patent, would not he coin money?

The use of a known remedy to produce a particular effect in any given branch of professional practice, or in the treatment of a given class

of cases, is the principle involved. This, so far as I can discover, from a careful examination of the specification, is the exact principle implied in it. As to the rectitude of this principle, professionally, socially or morally, I say nothing. Each one can judge for himself. I believe the illustrations I have used above are correct and appropriate—that is, if surgery and the practice of medicine are parts of one and the same profession. If surgery is a mere mechanical operation, and is to take its place in the same category as other operations in mechanics, then the case is altered. Success in the mechanic arts depends, not only upon the skill with which their processes are accomplished, but often upon the processes themselves, and when a man invents a process by which the same result can be accomplished better than before, he is permitted, by common consent, to enjoy the benefit of his invention for a limited time. If surgery puts in the same claim for its inventions, let it be divorced from the liberal professions—from the “humanities,” and hang out before its office doors, as in the days of Ben Jonson, a staff wound with a red tape, as a *sign* that “surgery is done here.” We all know the origin of the barber’s pole; and, Mr. Editor, there is a more close connection between surgery and barbering, than one would at first imagine. Many of the operations of *surgery* are *barbarous*, and the operations of *barbering* are often surgical. Indeed, many a poor wight would consider it no small alleviation of one of the miseries of human life, could he inhale the letheon before submitting to the most common operations of barbering. Mem. Barbers may use the letheon without infringing upon the patent. With the above remarks, which have extended much farther than I intended, I send you a copy of the specification, which has recently come into my hands, thinking it will gratify the curiosity of many of your brethren.

Yours, S.

March, 1847.

“*The United States Patent Office.*—To all persons to whom these presents shall come, greeting: This is to certify, that the annexed is a true copy upon the records of this office, of the specification of Jackson and Morton’s Letters Patent, dated 12 Nov., 1846.

“In testimony whereof, I Edmund Burke, Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this twelfth day of February, in the year of our Lord one thousand eight hundred and forty-seven, and of the Independence of the United States the seventy-first.

EDMUND BURKE.”

The Schedule referred to in these Letters Patent, and making part of the same.

To all persons to whom these presents shall come: Be it known, that we Charles T. Jackson and William T. G. Morton, of Boston, in the County of Suffolk and State of Massachusetts, have invented or discovered a new and useful improvement in surgical operations on animals, whereby we are enabled to accomplish many, if not all operations, such as are usually attended with more or less pain and suffering, without any or very little pain to, or muscular action of persons who undergo the

same; and we do hereby declare that the following is a full and exact description of our said invention or discovery.

It is well known to chemists that when alcohol is submitted to distillation with certain acids, peculiar compounds, termed *ethers*, are formed; each of which is usually distinguished by the name of the acid employed in its preparation. It has also been known that the vapors of some, if not all these chemical distillations, particularly those of sulphuric ether, when breathed or introduced into the lungs of an animal, have produced a peculiar effect on its nervous system; one which has been supposed to be analogous to what is usually termed intoxication. It has never (to our knowledge) been known until our discovery, that the inhalation of such vapors (particularly those of sulphuric ether) would produce insensibility to pain, or such a state of quiet of nervous action as to render a person or animal incapable to a great extent, if not entirely, of experiencing pain while under the action of the knife, or other instrument of operation of a surgeon, calculated to produce pain. This is our discovery, and the combining it with or applying it to any operation of surgery, for the purpose of alleviating animal suffering, as well as of enabling a surgeon to conduct his operations with little or no struggling or muscular action of the patient, and with more certainty of success, constitutes our invention. The nervous quiet and insensibility to pain produced on a person is generally of short duration; the degree or extent of it, or time which it lasts, depends on the amount of ethereal vapor received into the system, and the constitutional character of the person to whom it is administered. Practice will soon acquaint an experienced surgeon with the amount of etheric vapor to be administered to persons, for the accomplishment of the surgical operation or operations required in their respective cases. For the extraction of a tooth the individual may be thrown into the insensible state, generally speaking, only a few minutes. For the removal of a tumor, or the performance of the amputation of a limb, it is necessary to regulate the amount of vapor inhaled, to the time required to complete the operation. Various modes may be adopted for conveying the etheric vapor into the lungs. A very simple one is to saturate a piece of cloth or sponge with sulphuric ether, and place it to the nostrils or mouth so that the person may inhale the vapors. A more effective one is to take a glass or other proper vessel like a common bottle or flask. Place in it a sponge saturated with sulphuric ether. Let there be a hole made through the side of the vessel, for the admission of atmospheric air (which *hole*) may or may not be provided with a valve opening downwards, or so as to allow air to pass into the vessel), a valve on the outside of the neck opening upwards, and another valve in the neck and between that last mentioned and the body of the vessel or flask, which latter valve in the neck should open towards the mouth of the neck or bottle. The extremity of the neck is to be placed in the mouth of the patient, and his nostrils stopped or closed in such manner as to cause him to inhale air through the bottle, and to exhale it through the neck and out of the valve on the outside of the neck. The air thus breathed, by passing in contact with the sponge will be charged with the

etheric vapors, which will be conveyed by it into the lungs of the patient. This will soon produce the state of insensibility or nervous quiet required.

In order to render the ether agreeable to various persons, we often combine it with one or more essential oils, having pleasant perfumes. This may be effected by mixing the ether and essential oil, and washing the mixture in water. The impurities will subside, and the ether, impregnated with the perfume, will rise to the top of the water. We sometimes combine a narcotic preparation, such as opium or morphine, with the ether. This may be done by any ways known to chemists, by which a combination of etheric and narcotic vapors may be produced.

After a person has been put into the state of insensibility, as above described, a surgical operation may be performed upon him, without, so far as repeated experiments have proved, giving to him any apparent or real pain, or so little in comparison to that produced by the usual process of conducting surgical operations, as to be scarcely noticeable. There is very nearly if not entire absence of all pain. Immediately or soon after the operation is completed, a restoration of the patient to his usual feelings takes place, without, generally speaking, his having been sensible of the performance of the operation.

From the experiments we have made we are led to prefer the vapors of sulphuric ether to those of muriatic or other kinds of ether, but any such may be employed which will properly produce the state of insensibility without any injurious consequences to the patient.

We are fully aware that narcotics have been administered to patients undergoing surgical operations, and, as we believe, always by introducing them into the *stomach*. This we consider in no respect to embody our invention, as we operate through the *lungs and air passages*, and the effects produced upon the patient are entirely or so far different as to render the one of very little, while the other is of immense, utility. The consequences of the change are very considerable, as an immense amount of human or animal suffering can be prevented by the application of our discovery.

What we claim as our invention is the herein before described means by which we are enabled to effect the above highly important improvement in surgical operations, viz., by combining therewith the application of ether or the vapor thereof substantially as above specified.

In testimony whereof, we have hereunto set out signatures this twenty-seventh day of October, A. D. 1846.

Witnesses,

R. H. Eddy,

W. H. Leighton.

CHARLES T. JACKSON,

WM. T. G. MORTON.

SPEEDY UNION OF FRACTURED BONES IN AN AGED FEMALE.

To the Editor of the Boston Medical and Surgical Journal.

SIR,—On the 25th of January last, I was called to visit Mrs. B., aged 94 years, who had received an injury from a fall some hours before.

Upon examination, I found a fracture of both the small bones of the right limb; of the tibia, about two inches below the knee, and of the fibula, a little lower. From the fact that she was suffering from partial paralysis of the right side, and her advanced age, there seemed but little prospect that a union of the broken bones would ever be effected. However, I placed the broken ends of the bones in apposition, and retained them there by a many-tailed bandage, and suitable splints. For a week or more she experienced much pain from the spasmodic action of the muscles, and the inflammation and soreness of the limb. At the end of the third week, the inflammation and swelling had entirely subsided. On my next visit, eight days from that time (February 23), I found that osseous union of considerable strength had actually taken place. Since then, her recovery has been rapid, and the foot can be placed upon the floor, and the limb moved with ease. And what may be considered somewhat remarkable, she can now use her right hand in helping herself to food, which she could not do before the accident. Respectfully,

South Glastenbury, Ct., March 15, 1847.

ROSWELL HAWLEY.

INHALATION OF ETHEREAL VAPOR FOR MITIGATING HUMAN SUFFERING IN SURGICAL OPERATIONS AND ACUTE DISEASES.

By W. C. Keep, M.D., D.D.S.

[Communicated for the Boston Medical and Surgical Journal.]

THE ether must be perfectly pure. The ether of the shops has probably answered the purpose for which it has been used heretofore, but is wholly unfit for inhalation. The specimens I have examined contained a large percentage of alcohol, and some sulphuric acid. These and all other impurities must be removed by careful washing before the article can be depended on for producing the desired results, or even be safely administered.

Apparatus.—It is known that a perfect and entire state of insensibility was produced several years since by applying a pocket handkerchief to the nose, which had been saturated with sulphuric ether. This was the mode, as I understand, recommended by Dr. C. T. Jackson when he suggested the use of the ether to Dr. Morton. For greater convenience an apparatus was contrived. Many individuals made suggestions respecting the mode of constructing it. The first that was made answered the purpose, and improvements were left to the manufacturers of philosophical instruments.

The apparatus should have a reservoir, a mouth-piece of convenient shape, and a valve near it, admitting the vapor freely from the receiver to the mouth and lungs, but perfectly preventing the expired gases from again entering it. The reservoir should have two openings for admitting the atmosphere, one at the farther extremity of the reservoir to admit the atmosphere at the lower part of the reservoir, in order to insure a more perfect mingling of the same with the vapor of ether, which is two and a half times its own weight. The other, which may be half an inch in

diameter, fitted with a ground-glass stopper, should be placed as near the valve and mouth-piece as convenient, and is designed only to be used when the pressure of the vapor of the ether prevents the requisite quantity of atmospheric air from entering and passing through the reservoir.

I do not allow the large aperture for admitting air to be closed by a spring valve; the operation of which I have found to be unequal, but leave an opening according to the temperature, seldom less than half a square inch, and sometimes a full square inch. All the bad symptoms I have seen, I am satisfied were produced by a deficiency of atmospheric air, or bad ether. As the vapor of the ether and atmospheric air are mingled at the time they are used, the proportions of each would vary greatly in the same apparatus at different temperatures. At 80° it might be difficult to introduce and pass through the reservoir atmospheric air enough to prevent suffocation. At 34° the vapor of the ether would be deficient, and insensibility to pain would not be produced.

Having the apparatus made to answer the purposes above described, place one thickness of linen diaper in the receiver resting on the base. Two or three tablespoonsful of the purest sulphuric ether being introduced into the reservoir, the temperature of the apparatus must receive *special attention*. According to Dr. Ure, the elastic force of the vapor of ether at 34° is equal to sustaining a column of mercury of 6.20 inches; at 64° , 13 inches; and at 84° , he found the elastic force equal to 20 inches.

A convenient standard of temperature, to be shown by a thermometer connected with the instrument, would greatly aid the operator, and insure uniform success; as by the temperature the power of the ether is and can be known, regulated and controlled, and asphyxia, or failure, of course avoided. This I regard as very important.

During the cold season I have kept my apparatus and ether out of doors, and thus saved myself, family and patients from the constant presence of the vapors. On taking the apparatus in, I have it freshly charged with ether. After the patient has commenced inhalation (which should be done while the apparatus is cool) I raise the temperature suddenly by applying a towel dipped in hot water to the receiver. If the apparatus has been only a few minutes closed and kept in a warm place, the vapor of the ether will be suffocating, and requires to be diluted by admitting air near the mouth-piece, though when used cold, as above, the small opening is not needed.

I would specially urge all who administer the vapor of ether to observe the most punctilious neatness in all their arrangements. While a clean, freshly charged apparatus is rather agreeable to most patients, one which has been neglected is exceedingly repulsive, and to many absolutely intolerable.

I have discontinued the use of sponge on account of the partial decomposition it undergoes when immersed in ether. Cotton and linen cloth soon become musty if left, but by having the apparatus washed and a clean piece of cloth of porous texture introduced each day, no decomposition will be apparent.

In the last 200 cases (nearly all highly intelligent persons, capable of

accurate observation) I have not known one who was not conscious of existence, of time, and of the operation that was being performed, but though the intellect was nearly or quite undisturbed, the sensibility to pain has been uniformly greatly diminished, and generally entirely lost.

I have extracted teeth for persons of all ages, from 6 to 60. One individual has taken it five times, with several days interval between each operation, and had two teeth extracted each time. A lady who suffers severely from palpitation of the heart, and has usually been very faint when she has had a tooth extracted, inhaled the vapor and had two extracted without any unfavorable symptoms. I have destroyed the entire nerve of the tooth for a number of persons while under the influence of the vapor, filling the canal of the nerve with gold as soon as I felt sure that there would be no bleeding, and then filling the carious cavity in the usual manner. Thus far all these cases have been successful, and free from inflammation, so common when the nerve of a tooth has been destroyed by arsenic.

I am firm in the belief that this will be a valuable addition to dental surgery, for I am fully persuaded that this is a better mode of treating these cases than any we have yet been acquainted with.

On the night of the 18th I was called to administer the vapor of ether to a particular friend of mine (under the direction of Dr. Homans, his family physician, and Dr. Ware) who was suffering intense pain in the abdomen. The particulars of this case, so full of interest, will be given to the public by Dr. Ware.

I entertain the opinion that the inhalation of vapor of ether, when administered in a proper manner, by a person understanding it, and capable of regulating its quantity and power, as every person using it should be able to do, is safe, and will greatly mitigate, and in most cases take away all pain in dental and surgical operations, and that it may be relied on for relief in most cases of intense physical suffering from acute disease of short duration.

I make this communication at the suggestion of no one, and I have no interest to serve, that I am conscious of, other than that of giving to the public the results of my own observations.

Boston, April 3, 1847.

MASSACHUSETTS GENERAL HOSPITAL AND THE McLEAN ASYLUM.

[Communicated for the Boston Medical and Surgical Journal.]

THE trustees present for the last year an exceedingly favorable report of these institutions. In both the income has exceeded the expenditures, leaving a balance to be appropriated for increased comforts and advantages. It appears that one of the new wings of the Allen St. Hospital has been completed and is now occupied. One who visits the house cannot fail to be struck with the neatness with which the wards have been finished and the conveniences with which they are furnished. But—there is apt to be a *but* everywhere—we are equally struck with the great mistake, made by some one, in arranging the apparatus for warming and ventilating the house. It is to be regretted that the Committee of the Trustees "call the attention of the Corporation to the improved

means of ventilation," as it gives one the impression, that if not perfect, the ventilation is very good. Now this is far from being the case. A properly ventilated house should be free from unpleasant odors. This is not always the case at the Hospital. We were engaged, with a friend, some three or four years ago, in examining the new flues and furnaces that had been put into one of the old wings, which were of the same sort as the present, and we recollect the prediction made then, that probably the officers of the house would not always find it free of erysipelas and other disease engendered by ill ventilation. This prediction we repeat now. Air enough is probably admitted to the wards, at that time more than enough was brought in, but it was and is so introduced that the patients cannot have the full benefit of it. If a grain of gun powder were flashed in the flue entering one of the wards, the course of the smoke would show the course of the admitted air, and unless we are marvelously mistaken, it would be found to hang round the room, as the foul air does, mixed with pure air. We are sorry that this is the case, and sorry, if to the new east wing of the house the same means are to be applied, in the same way. It is always best to do business right at first; it certainly is as cheap. It is better for the patients, for, after being told how well any new plan will succeed, and on being disappointed, men are apt to doubt the advisability of following any plan. At one of the insane asylums in this country, the physician was virtually advised against the adoption of any means of ventilating his house.

The lecture room of the Hospital will hold about two hundred students, perhaps more (it is not a large room for this number), and here, two or three times a week, a professor sits and lectures upon the causes and treatment of disease, while before his nose is the effluvia arising from sweating, and sometimes not the cleanest, of bodies. What is to carry off all this? Why a hole not eighteen inches square, and that in such a position that it cannot act to its full power. It is not possible that the Physicians of the Hospital had any voice in this matter. The offence is too rank to be charged upon men of any scientific knowledge.

There are other buildings in the city which need improvement in this respect.

Of Dr. Bell's report we can only speak in praise. He has none of the long-drawn tables comprised in the pages of the reports of some institutions, and from which, with pencil and paper, you can derive no knowledge. "Of those discharged the best judgment we can form is, that 65 have recovered, 9 have died, and the remaining have been dismissed, in accordance with the necessities or decisions of friends, in various conditions, entered on the register under the head of *much improved*, *improved*, *not improved*, *unfit*, and, after various periods of residence, from a number of years to a single night."

We are satisfied that the Asylum is in able hands, and if its statistics are not so imposing as those of some other institutions, its success is quite as great.

Moxa.

April 1, 1847.

 THE BOSTON MEDICAL AND SURGICAL JOURNAL.

 BOSTON. APRIL 7, 1847.

Profits of Medical Practice.—Do medical practitioners succeed as well in the accumulation of wealth by their professional efforts, as men in the practice of law, in trade, and in mechanical pursuits? The fact is obvious that some are rich, but many have maintained an unequal contest with poverty through a long life, on short rations and in a fatigue dress. No one willingly admits that the great end in view, in the practice of medicine, is the base one of getting gain. There is a kind of hypocritical cant in conversational intercourse, and sometimes in medical writings, about the high and noble purpose of doing good, by the practice of physic, which is far above all the vulgar considerations of fees or fatness. That it is a profession in which an opportunity is presented for exercising the natural philanthropic yearnings of the human heart, chastened and heightened by a profound sense of christian duty towards suffering humanity, must be admitted; but to pretend that a man takes upon himself the ceaseless labors of a medical practitioner for no other earthly motive than to prescribe drugs, as the greatest of earthly blessings, is positively ridiculous, besides being untrue. Such a physician would fain make it appear that his charities were in proportion to the weight and measure of his doses. The fact is simply this, that the practitioner of medicine has a stomach to be filled, a body to be clothed, and in most cases a family to maintain—and a variety of relations which he bears to the whole community, renders it positively necessary that he should conform to the usages of civilized society. To do so there must be an adequate income from some source to meet the expense of being a part and parcel of the general population. But very few medical practitioners, in this country, begin life with property; those who have that advantage, rarely trouble themselves about the details of practice—unless it is for the purpose of maintaining a family position. In such instances, the heir-loom is the profession, because personal influence has its origin in the talismanic idea, so far as the public mind is concerned, that professional knowledge is transmitted from generation to generation, like an entailed estate.

In looking into the individual history of all orders of physicians, the conclusion is irresistible, that they are not as successful in the gathering up of property as gentlemen of the law, merchants, or active, bold, operating mechanics. The fees of lawyers are regulated either by special law, bar rules, or custom, in a manner that secures to them every fraction of their dues—so that a loss by bad debts in their business, would be an almost unprecedented event. Merchants and mechanics most generally, in their bargains, both require and give security, without giving offence; but the physician goes wherever called, not knowing whether he is to be paid or not. His losses, therefore, are immense in the course of a life of medium length. His capital is earning nothing unless he renders a personal service. Every physician is satisfied that one half of his practice, at least, is utterly lost, and perhaps more. If he makes himself comfortable in the possession of property for old age, it is usually accomplished by some collateral contrivance,

and not by the income of his profession. Therefore, the vulgar impression that the practice of medicine is a profitable business, is not true, with the mass of the profession. There are prominent instances of individual wealth in our ranks; but the number of physicians who have made themselves rich by legitimate practice is so small, as hardly to be recognized either in town or country.

Stockton & Co.'s Dental Intelligencer.—This monthly, in numbers of 28 pages each, appears both here and in England, having an editor in each country. Its leading article for March, is quite racy. Without dosing the editor of the *Medico-Chirurgical Review* and *Journal of Practical Medicine*, with letheon, Stockton & Co. cut down upon his vital parts *sans ceremonie*, and then leave him to wince and agonize under their inflictions, without the least apology for their unsympathizing operation. It will not answer to treat these gentlemen of the art dental, with neglect, since they crush and grind between their teeth those who have offended them, as though they loved to pulverize their enemies.

Dentistry has assumed a position in the United States that commands the respect of thinking, scientific men; and it is evident, too, that far greater advances have been made here in every department of that profession, viz. the science, literature and mechanical subdivisions of the business, than in any part of Europe. They have a right, therefore, to complain when treated with neglect by those who should be first and foremost in acknowledging their just claims to distinction. Excellent treatises, several admirably conducted journals, one or two dental colleges, and, likewise, the *ne plus ultra* of workmanship in gold, in the manufacture of artificial teeth, in filling, and, better than all, the united efforts of the whole body of respectable operative dentists in the States, to put down quackery in their profession, and furnish the people with workmen qualified in all respects to serve them properly, calls for our thanks, and we are always happy to acknowledge their claims to the respect and consideration of all who are interested in an important department of the health and well-being of the community in which we live.

Boston Lying-in Hospital.—Valuable as this institution proves to be, the locality is exceedingly objectionable, and some effort should be made to bring it down into the heart of the city, where it should have been placed at first. The land might be sold to good advantage, and the money expended equally advantageously in the purchase of a large, convenient house nearer to the centre of population. There are several large, quiet estates in West Street, for example, sufficiently spacious, having good, airy apartments, that can never be procured on easier terms than at the present time. As the patients are not all on charity, but pay a small fee, probably the patients would be quadrupled were the establishment down in town. It would also better accommodate the directors, the physicians, and every person, in fact, who has any connection with it.

Children's Infirmary in Boston.—Although but just organized, it is evident that this institution is precisely what is needed in this densely peopled metropolis, and it is already appreciated by those for whose benefit it was

established. Dr. Lawrence certainly shows to the community, by the most unequivocal testimony, that he is a philanthropist, since he boards, clothes, nurses, prescribes and finds medicine for all the patients who enter the infirmary. May he long live to follow the example of his excellent father, whose purse is always open to the deserving poor who have none of their own.

Chinese Physiology.—"In medicine," says Mr. Williams, in his lecture on China, "the Chinese practice is better than their theory. The knowledge of some drugs enables them to effect occasional cures; but the Chinese have never dissected the human frame, and therefore know nothing of its anatomy. They assert that the food goes through the heart to the stomach, —and further, that there are three avenues through the body!" No wonder American physicians are in demand in the central, flowery Nation. Dr. Parker's surgical operations, in novelty, boldness and success, demonstrate his qualifications, while they show that his patients bear the knife like oysters.

Ether in the passage of Gravel. (Communicated by Dr. Ware, to the Boston Society for Medical Improvement.)—The inhalation of sulphuric ether was recently employed, in this city, for relief of the pain attendant on the passage of a renal calculus through the ureter, in a case under the care of Drs. Homans and Ware. The patient, a gentleman of about fifty years of age, was convalescent from pleuro-pneumonia, having still some pain in the side, cough and bloody expectoration. About seven in the evening, immediately after an evacuation from the bowels, he was seized with intense pain, in a spot on the left side, midway between the umbilicus and the crest of the ileum. Elixir of opium was given in the course of an hour and a half, to the amount of 400 drops; several enemata were administered, and various local applications were made, with but slight alleviation, and the suffering was still of the most severe description.

At a quarter before nine, the ether was administered by Dr. Keep. The patient did not become at any time entirely insensible, but was very soon comparatively easy, and remained so as long as the influence of the remedy continued. As soon as pain returned, he requested a repetition of the inhalation, and was again relieved. The pain still returned, from time to time, as the influence of the ether subsided, but was kept under by a renewal of the process until three o'clock in the morning, when the patient became so easy, that it was no longer necessary. During this period, of about six hours, there were thirty repetitions of the operation which were counted, besides several others which were not.

There was no subsequent return of the pain, and no inconvenience whatever was experienced. The pain in the side and bloody expectoration almost immediately ceased; and the patient states, that a pain, to which he has been subject for many years, when lying on the left side, has left him since the inhalation.

The following practical inferences seem worthy of being noticed in connection with this case.

1. That a pain of this description, which is not relieved by large doses of opium, may be mitigated by inhalation of ether, without suspending that natural course of things by which its cause will be sooner or later removed.

Hence this remedy may be applicable during the passage of a biliary calculus, in colic, other cases of spasm, and, perhaps, in some cases of even natural labor.

2. That an individual may be kept under the continued influence of ether, for a long period of time, with safety.

3. That the inhalation is not necessarily irritating to even diseased lungs, and that the presence of considerable disease in them does not constitute an objection to its use, when circumstances demand it.

The practical bearing of these inferences is not affected by any doubts as to the accuracy of the diagnosis. Even were the medical attendants wrong in their judgment on this point, which is very possible, it is not the less true that the patient was speedily and for a long time relieved of intense suffering, that the cause of the pain was during this time removed, and that no subsequent ill effects were the result.

Boston, April 2, 1847.

New Professors in Harvard University.—We learn that the Corporation of Harvard University, since the resignation of Dr. Warren, have appointed three new professors, two of whom are to be attached to the Massachusetts Medical College in Boston, and one to the University at Cambridge. The new incumbents are, Oliver W. Holmes, M.D., Professor of Anatomy and Physiology; * John B. S. Jackson, M.D., Professor of Pathological Anatomy, and Curator; and Jeffries Wyman, M.D., Hersey Professor of Anatomy at Cambridge.

All the above gentlemen are well known to the public as working men, who by their own talents and persevering industry, have raised themselves to the head of the departments in science which they are respectively to teach. Dr. Holmes is eminently distinguished in our medical community as a talented and eloquent lecturer, and an accomplished scholar and man of science. He has been for ten years a successful teacher of anatomy and physiology in the Tremont Street Medical School, and was two years a professor of the same branches in Dartmouth College. Dr. Jackson, as a pathological anatomist, has no superior in the United States. The medical profession owe him much for many years of unrequited labor, which nothing but an ardent devotion to science for its own sake, could have sustained. The rich collection of morbid anatomy of the Society for Medical Improvement, and its forthcoming descriptive catalogue, are mainly indebted to him for their existence. Dr. Wyman is our best comparative anatomist, and has filled with great credit the Chair of Professor of Anatomy in Richmond, Va., for the last two years. He will form an important acquisition to the new scientific school about to be established at Cambridge. We are gratified that the choice of the Corporation has fallen on candidates in whose favor we believe the general suffrage of the medical profession in Massachusetts would have cordially united.

Tennessee Delegates to the Medical Convention.—At a recent meeting of the Medical Society of Tennessee, it was resolved to send six delegates to represent said Society in the National Medical Convention which is to meet

* This is called the Parkman Professorship of Anatomy and Physiology, in honor of Dr. George Parkman, a distinguished benefactor of the Medical School.

in Philadelphia in May next. The names of the delegates are Dr. J. B. Hays of Columbia, and Drs. Stout, Martin and Buchanan of Nashville, Dr. Avent of Murfreesborough, and Dr. Nelson of Davidson County.

Insensibility during Surgical Operations.—The Philadelphia Medical Examiner for April, in view of the wonderful success of the inhalation of ether in Europe, has the following remarks on the subject.

"In a former No. we mentioned that a patent had been taken out by two gentlemen in Boston, for the discovery of a mode of rendering patients insensible to the pain caused by severe surgical operations. It was then spoken of as a 'compound gas,' and since called 'letheon.' Misled at the time by the name given to the substance employed, we conjectured that it was an ethereal solution of some narcotic. It is now ascertained by numerous experiments, that sulphuric ether alone possesses the virtues claimed for the 'letheon,' or 'compound gas,' and hence much of the mystery with which the subject was sought to be enveloped is dispelled, and as we believe it is generally conceded, both in this country and Europe, that the patent is invalid, the repugnance we felt towards any extended notice of the matter is removed, and we shall from time to time notice the experiments and observations made in various parts of the world, confirmatory or otherwise of the good effects of this extraordinary agent."

Ulceration of the Neck after Scarlet Fever.—J. David, Esq., M.D., M.R.C.S.E., &c., relates the following case:—"I was requested, on the 10th December, to see a little boy, 6 years old, confined to his bed with scarlet fever; the symptoms were severe, and continued so for a fortnight; a change then took place, his health daily improved; sitting up, and taking light nourishing diet. At this period I noticed a swelling in his neck, which he complained of being painful on pressure. Liniments, fomentations, and poultices, were applied, but it daily increased in size, and eventually came to a point; an opening was made, and about four ounces of the most fetid matter was discharged; the orifice increased in size, being ragged, and of a dark-blue appearance, exposing the jugular vein more than an inch; the coats appeared black, livid and unhealthy. I cautioned the parents not to allow the child to be left alone, and gave them my reasons. My orders were attended to, but unfortunately, whilst the nurse was sleeping, early in the morning, the coats of the vein gave way, profuse hæmorrhage took place, and upon the mother entering the room she found her child dead, deluged in blood, and the nurse comfortably asleep."

TO CORRESPONDENTS.—The papers of Drs. Allen and Dow have been received.

DIED.—At Louisville, Ky., Dr. Richland Wautyn, by falling from a window of a hotel.—In Ulster Co., N. Y., Dr. Green Miller, 77.—Near Baton Rouge, La., Dr. John C. Williams, 55.

Report of Deaths in Boston—for the week ending April 3d, 69.—Males, 31—females, 38. Stillborn, 2. Of consumption, 14—lung fever, 3—typhus fever, 5—scarlet fever, 2—diarrhoea, 1—marasmus, 7—dropsy, 2—dropsy on the brain, 3—dropsy on the chest, 2—disease of the brain, 1 hæmorrhage, 1—travel, 1—apoplexy, 2—infantile, 8—teething, 2—accidental, 1—abscess, 1—child-bed, 3—disease of the heart, 1—inflammation of the brain, 1—inflammation of the lungs, 3—disease of the bowels, 2—pleurisy, 1—inflammation of the bowels, 1—old age, 2. Under 5 years, 29—between 5 and 20 years, 9—between 20 and 40 years, 15—between 40 and 60 years, 6—over 60 years, 10.

Harvard University—Dr. Warren's Resignation.—At a stated meeting of the President and Fellows of Harvard University, in Boston, Feb. 27, 1847,

The President laid before the Corporation the following communication from Dr. WARREN, resigning his professorship.

[Here follows in the records a copy of Dr. Warren's letter.]

Whereupon—

Voted. That in accepting the resignation of Dr. John C. Warren, as Hersey Professor of Anatomy and Surgery, this Board is deeply sensible of the important services rendered to the University by Dr. Warren; and holds in grateful recollection the successful exertions made by him, for a period of more than forty years, and in continuance of those of his honored father, to raise the character and promote the interests of the Medical School.

Voted. That Dr. Warren be requested to continue in the discharge of the duties of his office till the close of the present academic year.

Voted. That the President be requested to communicate to Dr. Warren a copy of the foregoing votes, with the assurance that this Board cordially reciprocates the friendly and respectful sentiments expressed toward the Corporation and the University, in his letter of resignation.

On vote by ballot, Dr. John C. Warren was chosen Emeritus Professor of Anatomy and Surgery in the University, in consideration of his faithful and valuable services as Hersey Professor of Anatomy and Surgery.

A true copy from the record.

JAMES WALKER, Secretary.

Mortality of London.—The deaths within the week ending January 23, amounted to 1225, or 157 above the weekly average for the five past winters. Of these, 531 were from diseases of the lungs, 54 from heart diseases, 50 from hooping cough, 28 from typhus, 45 from apoplexy and paralysis, and 65 from natural decay. Electricity positive for the six latter days of the week; weather overcast; mean of thermometer, 32° 6'. Since the commencement of this year, the district of Lewisham and sub-district of Hampstead have become included in "London," which thus comprises an area of 115 square miles, with a population, in 1841, of 1,948,211. The deaths within the bills of mortality henceforth will, of course, be materially more numerous in the aggregate; but they may be expected to be less relatively to the population, the additions to the metropolis (on the line of the Brighton and Birmingham Railways) comprising some of the most healthy districts in its vicinity.—*Lancet.*

Medical Miscellany.—A bill to incorporate an Asylum for the Insane has passed the legislature of Indiana.—Recent advices from Asia, speak of the sad destruction of life by the cholera. It has finally reached Oroomiah, but is not quite so destructive, in the first ten days, as at Tabreez and Tehran. Dr. Wright, our correspondent, was actively engaged among the sick and dying.—Word comes that during the whole of the hot weather at Amoy, in China, the public health was unimpaired. Not a single death occurred in the foreign community.—Dr. Smith, of Charleston, S. C., now at Constantinople, has had an audience with the Sultan, and stands well at court.—Mr. Phelps, the artificial limb manufacturer, of Boston, has gone to Europe to perfect himself by learning improvements abroad.